



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/699,104	10/31/2003	Deia Salah-Eldin Bayoumi	ABDT-0576/B030280	1874
23361	7590	09/05/2007		
ABB INC. LEGAL DEPARTMENT-4U6 29801 EUCLID AVENUE WICKLIFFE, OH 44092			EXAMINER JARRETT, RYAN A	
			ART UNIT 2125	PAPER NUMBER
			MAIL DATE 09/05/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/699,104

Applicant(s)

BAYOUMI ET AL.

Examiner

Ryan A. Jarrett

Art Unit

2125

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 30 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 21-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Specification***

The disclosure is objected to because of the following informalities:

In paragraphs [0001] and [0024], the assigned U.S. Patent Application No. should be filled in.

Appropriate correction is required.

### ***Claim Objections***

Claim 26 is objected to because of the following informalities:

In claim 26, "electronic" should be changed to "electrical" for proper antecedent basis.

Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 21-22 and 24-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sandoval US 6,345,259 in view of Montminy et al. US 5,946,210.

Regarding claims 21-22, 25, and 28-30, Sandoval discloses:

**21. A method for controlling at least one machine operable to manufacture ~~electrical~~ devices, said method comprising the steps of:**

**providing a store of business and manufacturing data** (e.g., col. 4 lines 25-36: “computerized business system”) **relating to ~~electrical~~ devices** (e.g., “discrete component manufacturing (such as in the automobile industry)”);

**providing a store of design data for ~~electrical~~ devices** (e.g., col. 14 lines 55-60: “Enrichment data can include product physical properties”, col. 38 lines 1-29: “specific finished product characteristics such as product dimensions and product densities”, “product specific lookup table”);

**retrieving information from said store of business and manufacturing data** (e.g., Fig. 2 #222,230,234,236, col. 4 lines 37-44: “A work order, specifying a manufacturing operation or a set of manufacturing operations, is created in the business system and distributed to the manufacturing execution system”);

**producing a list of ~~electrical~~ devices that need to be manufactured based on said information retrieved from said store of business and manufacturing data** (e.g., col. 4 lines 37-61, col. 16 lines 51-67: “Work order 222 can include information such as: product type; quantity to manufacture (at least one lot)”, col. 17 lines 28-39, col. 37 lines 46-49);

**selecting from said list a particular ~~electrical~~ device that needs to be manufactured by said at least one machine** (e.g., col. 4 lines 37-61, col. 17 lines 28-39: “The work order 222 also includes scheduling data 234”);

**retrieving design data for said particular ~~electrical~~ device from said store of design data** (e.g., col. 14 lines 55-60: “Enrichment data can include product physical properties”, col. 38 lines 1-29: “specific finished product characteristics such as product dimensions and product densities”, “product specific lookup table”);

**using said design data to generate control data for controlling said at least one machine to manufacture said particular ~~electrical~~ device** (e.g., col. 4 lines 62-64: “computes or determines setpoints”, col. 12 lines 35-50: “Setpoints 224 are computed after enrichments are acquired”, col. 35 lines 62-63: “Enrichments are supplemental data not included in work order 222 but required to properly compute setpoints”);

**transmitting said control data to said at least one machine** (Fig. 2 #224, e.g., col. 5 lines 11-24: “the setpoints are communicated to the proper real-time process control system within the computerized manufacturing systems);

**receiving real-time information concerning the manufacture of said particular ~~electrical~~ device from said at least one machine** (e.g., Fig. 2 #226,232, col. 5 lines 25-36, col. 12 lines 53-67); and

**updating said store of business and manufacturing data to reflect said received real-time information** (e.g., Fig. 2 #228,237, col. 5 line 55 – col. 6 line 4, col. 14 lines 4-24, col. 25 line 39 – col. 26 line 21).

**22. The method of claim 21 further comprising:**

**transmitting order information for ~~electrical~~ devices** (e.g., col. 1 line 29-60: “order-taking”, “order processing”) **over a network** (e.g., col. 1 line 29-60: “VTAM”); and

**updating said store of business and manufacturing data using said transmitted order information** (e.g., col. 10 lines 45-56: “Computerized business system 102 can be configured to perform functions such as determining manufacturing schedules based on customer orders”).

**25. The method of claim 21, wherein said information retrieved from said store of business and manufacturing data includes data relating to scheduling of multiple processes for manufacturing said particular ~~electrical~~ device** (e.g., Fig. 2 #234, col. 4 lines 37-44: “A work order, specifying a manufacturing operation or a set of manufacturing operations, is created in the business system and distributed to the manufacturing execution system”).

**28. The method of claim 21, wherein said real-time information received from said at least one machine includes completion of an intermediary component of said particular ~~electrical~~ device or the end of a process in the manufacture of said intermediary component** (e.g., col. 26 lines 64-67, col. 42 lines 51-59).

**29. The method of claim 21, wherein said at least one machine comprises a plurality of machines** (e.g., col. 16 lines 42-50, col. 41 lines 54-58).

**30. A method for manufacturing an ~~electrical~~ device (e.g., “discrete component manufacturing (such as in the automobile industry)”) in a facility, said method comprising:**

**providing at least one machine operable to manufacture ~~electrical~~ devices (e.g., Fig. 2 #104);**

**providing an order server (e.g., col. 1 line 29-60: “order-taking”, “order processing”, col. 10 lines 45-56: “customer orders”) connected by a network to a data exchange server (e.g., col. 1 line 29-60: “VTAM”);**

**providing an enterprise resource planning (ERP) server for storing and providing access to business and manufacturing data relating to ~~electrical~~ devices (e.g., Fig. 2 #102, col. 10 lines 45-56: “SAP R/2”, col. 14 lines 41-44), said ERP server being connected to said data exchange server (e.g., col. 1 line 29-60: “VTAM”);**

**providing a design data server for storing and providing access to design data for ~~electrical~~ devices (e.g., col. 14 lines 55-60: “Enrichment data can include product physical properties”, col. 38 lines 1-29: “specific finished product characteristics such as product dimensions and product densities”, “product specific lookup table”);**

**receiving an order for a particular ~~electrical~~ device in said order server (e.g., col. 1 line 29-60: “order-taking”, “order processing”, col. 10 lines 45-56: “customer orders”);**

**transmitting said order over said network to said data exchange server (e.g., col. 1 line 29-60: “VTAM”);**

**retrieving information from said ERP server (e.g., Fig. 2 #222,230,234,236, col. 4 lines 37-44: “A work order, specifying a manufacturing operation or a set of manufacturing**

operations, is created in the business system and distributed to the manufacturing execution system”);

**determining from said retrieved information that said facility can manufacture said particular ~~electrical~~ device** (e.g., col. 16 lines 42-67: “Work order 222 can include information such as...which workcenters to be used in manufacturing”, col. 37 lines 65-67, col. 38 lines 49-51);

**retrieving design data for said particular ~~electrical~~ device from said design data server** (e.g., col. 14 lines 55-60: “Enrichment data can include product physical properties”, col. 38 lines 1-29: “specific finished product characteristics such as product dimensions and product densities”, “product specific lookup table”);

**using said design data to generate control data for controlling said at least one machine to manufacture said particular ~~electrical~~ device** (e.g., col. 4 lines 62-64: “computes or determines setpoints”, col. 12 lines 35-50: “Setpoints 224 are computed after enrichments are acquired”, col. 35 lines 62-63: “Enrichments are supplemental data not included in work order 222 but required to properly compute setpoints”);

**transmitting said control data to said at least one machine** (e.g., Fig. 2 #224, col. 5 lines 11-24: “the setpoints are communicated to the proper real-time process control system within the computerized manufacturing systems”).

**receiving real-time information concerning the manufacture of said particular ~~electrical~~ device from said at least one machine** (e.g., Fig. 2 #226,232, col. 5 lines 25-36, col. 12 lines 53-67); **and**

**updating said business and manufacturing data in said ERP server to reflect said received real-time information** (e.g., Fig. 2 #228,237, col. 5 line 55 – col. 6 line 4, col. 14 lines 4-24, col. 25 line 39 – col. 26 line 21).

Regarding claims 21, 24, 26, 27, and 30:

Sandoval hints that the devices to be manufactured can be discrete components such as those used in the automobile industry (e.g., col. 1 lines 61-67), but does not explicitly disclose that the devices to be manufactured are electrical devices, per independent claims 21 and 30; wherein said particular electrical device is an electrical transformer, per claim 26; wherein the information retrieved from said store of business and manufacturing data includes data relating to scheduling of winding, tank fabrication and processing, per claim 27; wherein the design data comprises electronic drawings, per claim 24.

Montminy et al. discloses an automated system for configuring power converters, i.e. transformers (e.g., col. 1 line 16); further comprising retrieving data relating to scheduling of winding, tank fabrication and processing from a store of business and manufacturing data (e.g., col. 2 line 32 – col. 5 line 64, col. 10 line 45 – col. 11 line 32); further comprising retrieving electronic drawing data from a store of design data (e.g., Fig. 5, col. 2 lines 16-30, col. 8 lines 6-16).

Sandoval and Montminy are analogous art since they both disclose transactional business processing systems that are used to store information relating to the ordering, inventory, scheduling, designing, and manufacturing of products.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to apply the system of Sandoval, which integrates transactional and real-time manufacturing information, to the transformer configuration system of Montminy et al. since Montminy et al. discloses that a transactional ordering system can be advantageously used by a customer to specify functional and physical requirements and selection criteria of a desired transformer. A transformer design and bill of materials generator in turn provides the user with a transformer configuration that meets the customer's needs and is optimized with respect to the specified selection criteria. Also, the transformer generator provides the customer with power converter configurations in "real-time", and through access to component availability and manufacturing scheduling data, the converter generator provides the user with accurate configuration availability dates (e.g., col. 5 lines 20-45).

In summary, it is obvious that the system of Sandoval can be used in virtually any type of manufacturing process, including a transformer manufacturing process of the type disclosed in Montminy et al.

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sandoval as modified by Montminy et al. as applied to claim 22 above, and further in view of Schleiss et al. US 2003/0014500.

Sandoval as modified by Montminy et al. does not appear to specifically disclose that said transmitting of said order information is over the Internet.

It is well known in the art for customers to transmit product order information over the Internet, and such a modification to Sandoval as modified by Montminy et al. would have been obvious to one having ordinary skill in the art at the time the invention was made, due to the well known advantages of such of setup. For example, see Fig. 1 #24,28,30 of Schleiss et al.

***Response to Arguments***

Applicant's arguments, see page 6, filed 05/30/07, with respect to the rejection of claim 30 under 35 U.S.C. 101 have been fully considered and are persuasive. The rejection of claim 30 under 35 U.S.C. 101 has been withdrawn.

Applicant's arguments with respect to the rejections claims 21-30 based on Pierre et al. and Schleiss et al. have been considered but are moot in view of the new ground(s) of rejection.

**Conclusion**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan A. Jarrett whose telephone number is (571) 272-3742. The examiner can normally be reached on 10:00-6:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard can be reached on (571) 272-3749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ryan A. Jarrett  
Primary Examiner  
Art Unit 2125



08/27/07